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10/564,109

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Pascal Fourcade

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FINA TECHNOLOGY INC
PO BOX 674412
HOUSTON, TX 77267-4412

EXAMINER

LENIHAN, JEFFREY S

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

02/17/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/564,109 | Applicant(s) FOURCADE, PASCAL | |
| | Examiner Jeffrey Lenihan | Art Unit 1796 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-21 and 23-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-21 and 23-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is responsive to the amendment filed on 11/24/2008.
2. The objections and rejections not addressed below are deemed withdrawn.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.
4. The examiner notes that amended claim 23 fails to comply with 37 CFR 1.121, which requires that the text of any amended claim shall be submitted with markings to indicate the changes that have been made relative to the immediate prior version of the claims. As currently presented, subject matter added to the claim is not underlined, and subject matter deleted from the claim is not marked by either the use of strike-through or double brackets. For the purposes of expediting prosecution, the examiner has treated the claim as being in clean form. Any amendment submitted is required to rewrite amended claim 23 to comply with 37 CFR 1.121.

Claim Rejections - 35 USC § 112

5. Claims 20 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. Claim 20 recites the limitation that the composition of claim 19 (which ultimately depends from claim 8) contains "at least 50% by weight of said styrene-butadiene block copolymer;" claim 20 therefore reads on a composition containing 50% by weight of the styrene-butadiene block copolymer. The examiner notes, however, that a composition containing 50% by weight of the styrene-butadiene copolymer, as allowed by claim 20,

can contain at most 50% by weight of the ethylene polymer and therefore does not satisfy the limitation that one of the two claimed polymers is present in the composition in an amount greater than 50% by weight, as stated in claim 8.

7. Claim 23 recites “the composition of claim 22.” The examiner notes that claim 22 has been cancelled in the amendment filed on 11/24/2008; it is therefore unclear what combination of limitations is intended to be recited in the instant claim. As claim 23 recites the limitation of “said film,” it has been interpreted to depend from claim 16, the first claim to recite the formation of a film, for the purposes of examination.

Claim Rejections - 35 USC § 103

8. Claims 8-21 and 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nabeta et al, US4302554, in view of Marechal, EP1312624.

9. Nabeta discloses a polymer blend comprising at least one vinyl aromatic (co)polymer and an olefinic polymer (Column 1, line 64 to Column 2, line 7) which may be used to manufacture easily peelable films for plastic containers used for foodstuffs (Column 1, lines 7-34) (claims 16, 17). Said olefinic polymer may be a copolymer of ethylene and an α -olefin such as 1-hexene (Column 2, lines 37-49) (claim 12). Test run 35 of Nabeta discloses a composition comprising a blend of 45% by weight of an olefinic polymer and 55% by weight of a styrene/butadiene resin (Column 6, Table 1). Said olefinic polymer is recited to be an ethylene/butene copolymer, and said styrene/butadiene resin is a styrene/butadiene block copolymer comprising 80% by weight styrene and, by extension, 20% butadiene (Column 6, lines 30-40) (claims 8-11,

Art Unit: 1796

13,20,26). Said container may be made of plastics such as polystyrene or polypropylene (Column 4, lines 32-48) (claims 19, 21). Said films are prepared by blending the components in a mixing device and extruding the mix through an extruder (Column 3, lines 30-39) (claims 26, 27).

10. Nabeta does not teach that the styrene/butadiene block copolymer has a transmittance of 91% and a haze of either 3% or no more than 2% when measured according to ASTM D1003; however, the examiner takes the position that the claimed properties would be inherently present in the styrene butadiene resin of Nabeta. As disclosed above, the ratio of styrene to butadiene in the styrene/butadiene resin used in test run 35 falls within the range described by applicant for the block copolymer of the instant invention. As the prior art resin comprises the same monomers combined in the same ratio as described by applicant, the examiner takes the position that one of ordinary skill would reasonably expect that the recited properties of transmittance and haze would be inherently present in the styrene/butadiene resin of Nabeta (claims 14, 24, 25).

11. Nabeta does not specifically recite the use of a metallocene-catalyzed ethylene polymer in the preparation of the films of US4302554.

12. As discussed in the previous Office Action, Marechal discloses the use of a bridged metallocene catalyst (claims 8, 15) for the production of a low density polyethylene intended for use in the manufacturing of films for food packaging. Said polyethylenes may contain a C₃₋₂₀ α -olefin comonomer (¶ 0032). Marechal discloses

Art Unit: 1796

that ethylene (co)polymers prepared using said bridged metallocene catalysts have superior extrusion stability compared to other commercially available films.

13. Both Nabeta and Marechal are directed towards the preparation of polymer compositions which may be molded into films for the sealing of food containers. The examiner therefore takes the position that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the composition disclosed by Example 16 of Nabeta by substituting a metallocene-catalyzed ethylene copolymer for the olefinic polymer component of the composition of US4302554, thereby resulting in the production of a composition containing a metallocene-catalyzed ethylene polymer and a styrene/butadiene block copolymer, wherein the amount of the styrene/butadiene copolymer is greater than 50% by weight of the composition, as recited in claim 8. Said modification would allow for the production of a composition having improved extrusion stability, as taught by Marechal. The examiner further notes that, as the composition rendered obvious by the combination of Nabeta and Marechal comprises the same polymers combined in similar ratios to applicant's claimed invention, one of ordinary skill in the art would reasonably expect that the film produced from this composition would have the same properties of transparency as recited in the instant claims (claim 18).

14. Claims 8-11, 13, 14, 16-18, and 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilkie et al, US6022612, in view of the K RESIN ® DK11 product data sheet, published by Chevron Phillips Chemical Company in January 2001 (of record).

Art Unit: 1796

15. Wilkie discloses packaging films which comprise a polymeric layer made from a blend of a polyolefin and a thermoplastic rubber, particularly a blend of polyolefin and either a styrene/isoprene/styrene block copolymer or a styrene/butadiene/styrene block copolymer (abstract). Said packaging films may be used in food packaging (column 1, lines 15-22) (claims 16,17). Preferably, the polymer blend comprises 30-60% by weight of the thermoplastic rubber and 40-70% by weight of the polyolefin (Column 4, lines 51-54) (claims 8,9,10,23,26). Said polyolefin polymer may be a metallocene-catalyzed copolymer of ethylene and another alkylene, such as propylene (Column 5, lines 8-22) (claim 8,11). Films may be produced from the composition of Wilkie via extrusion (Column 7, lines 55-67) (claims 26,27).

16. Wilkie does not teach the use of a styrene/butadiene/styrene block copolymer wherein the amounts of styrene and butadiene fall within the claimed ranges.

17. K RESIN ® DK11 is a styrene/butadiene block copolymer which may be used in the production of films for food packaging (claim 16, 17). As noted on the product data sheet, this commercial copolymer had a haze of 2% and a light transmittance of 94% (claims 14,24,25). The data sheet does not recite the styrene content of the block copolymer, however, the examiner notes that it is known in the art that K RESIN ® DK11 comprises 75% by weight styrene and 25% by weight butadiene (see Kobashi et al, US7211626, Column 12 lines 10-17) (claims 8,13,26).

18. Both K RESIN ® DK11 and the composition of Wilkie are suitable for use in the production of polymer films for food packaging. The examiner therefore takes the position that it would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify the composition disclosed by Wilkie by substituting the commercially available K RESIN ® DK11 for the thermoplastic rubber component of US6022612. Said modification would both simplify the production of the composition by eliminating the need to synthesize the thermoplastic rubber and take advantage of the commercial polymer's properties of high light transmittance. As the resulting composition comprises the same polymers combined in similar ratios to applicant's claimed invention, one of ordinary skill in the art would reasonably expect that the film produced from this composition would have the same properties of transparency as recited in the instant claims (claim 18).

19. Claims 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Wilkie et al, US6022612 and the K RESIN ® DK11 product data sheet as applied to claim 8 above, and further in view of Marechal, EP1312624.

20. Neither Wilkie nor the data sheet teaches the use of a bridged metallocene catalyst.

21. As discussed above, Marechal discloses the use of a bridged metallocene catalyst for the production of copolymers of ethylene and olefins such as 1-hexene (0032) which may be used in the preparation of films suitable for use in food packaging applications (claims 12,15).

22. The applied references are all directed towards the preparation of polymeric films for the sealing of food containers. The examiner therefore takes the position that it would have been obvious to one of ordinary skill in the art at the time the invention was

Art Unit: 1796

made to modify the composition rendered obvious by the combination of Wilkie and K RESIN ® DK11 by substituting a metallocene-catalyzed ethylene copolymer for the olefin component of the composition of US6022612, thereby resulting in the production of a composition containing a metallocene-catalyzed ethylene polymer and a styrene/butadiene block copolymer. Said modification would allow for the production of a composition having improved extrusion stability, as taught by Marechal.

Response to Arguments

23. Applicant's arguments with respect to claims 8-21 and 23-27 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Lenihan whose telephone number is (571)270-

Art Unit: 1796

5452. The examiner can normally be reached on Monday through Thursday from 7:30-5:00 PM, and on alternate Fridays from 7:30-4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Irina S. Zemel/
Primary Examiner, Art Unit 1796

Jeffrey Lenihan
Examiner, Art Unit 1796

/JL/